Grizzly-Summer Lake 500 kV Line Planned Outage May 27-June 15 2008 1900-2400 hours

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Technical Management Team

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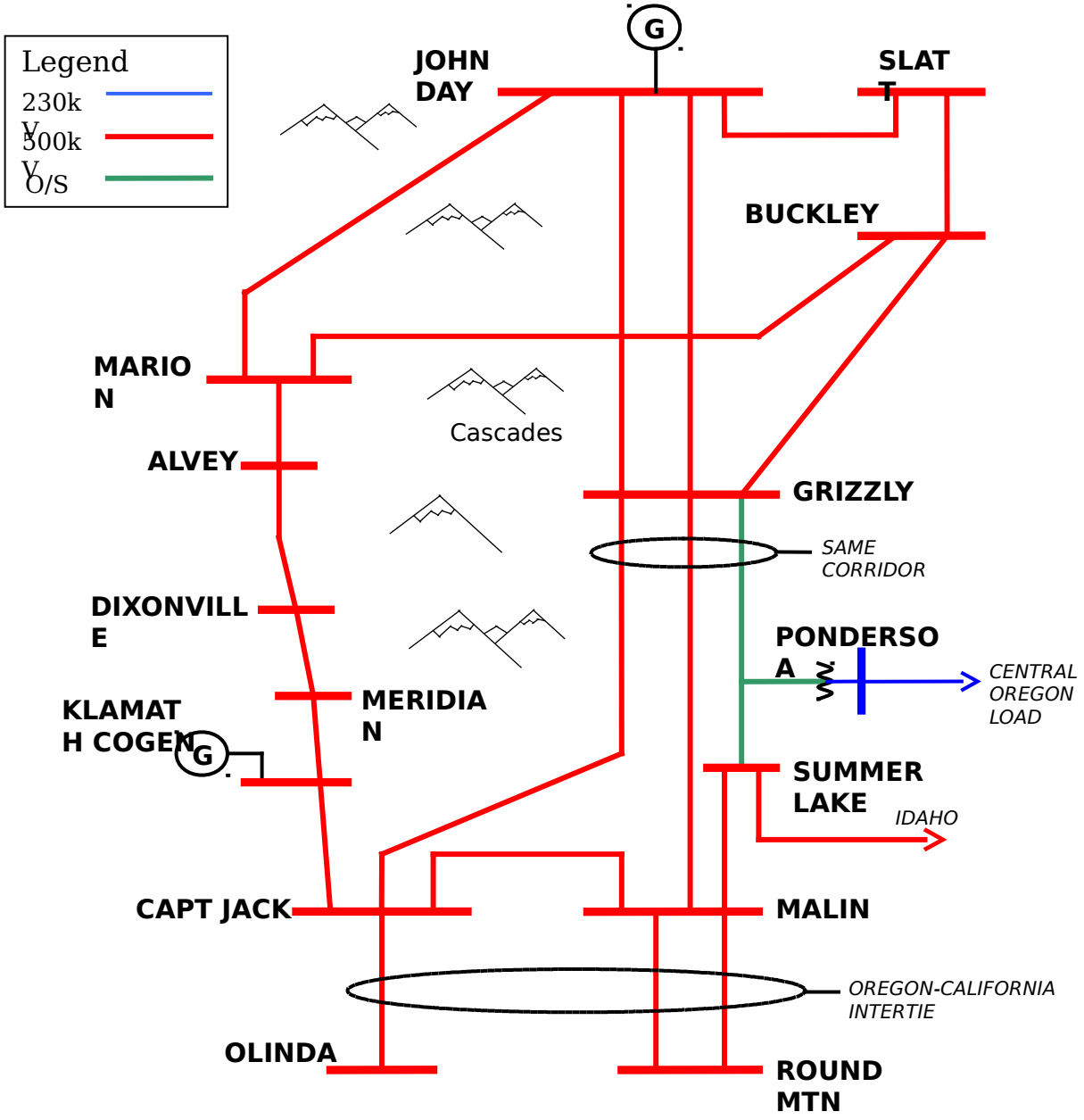
Background

- A continuous outage of sections of the Grizzly-Summer Lake line had been planned for spacer damper replacement for May 27 – June 15
- A planned outage of this line is hard to get because:
  - It significantly reduces the California-Oregon Intertie (COI) capability
    - OTC reduces from above 4000 MW to 2800 MW north to south to protect for the next double contingency
  - Ponderosa 500/230 kV transformer forced out of service and creates potential load service issues except during lighter load conditions
    - Late spring loads are lighter due to mild temperatures compared to winter and summer loads


Legend
230k V
500k V
O/S
JOHN DAY
G
SLAT T
BUCKLEY
MARIO N
Cascades
ALVEY
GRIZZLY
SAME CORRIDOR
DIXONVILL E
PONDERSO A
CENTRAL OREGON LOAD
KLAMAT H COGEN
G
MERIDIA N
SUMMER LAKE
IDAHO
CAPT JACK
MALIN
OREGON-CALIFORNIA INTERTIE
OLINDA
ROUND MTN

Outage

- In early May it was decided to cancel this line outage due to concerns about the impact of the outage on the COI with a late runoff
- Work to replace gun shot insulators, repair conductor and repair overhead ground wire on the line had also been planned
- There was a need to get that work done to prevent an unplanned outage of the line
  - There would not be another window of opportunity to take a planned outage of this line in 2008

Damaged Insulator String

Repairing Insulator String

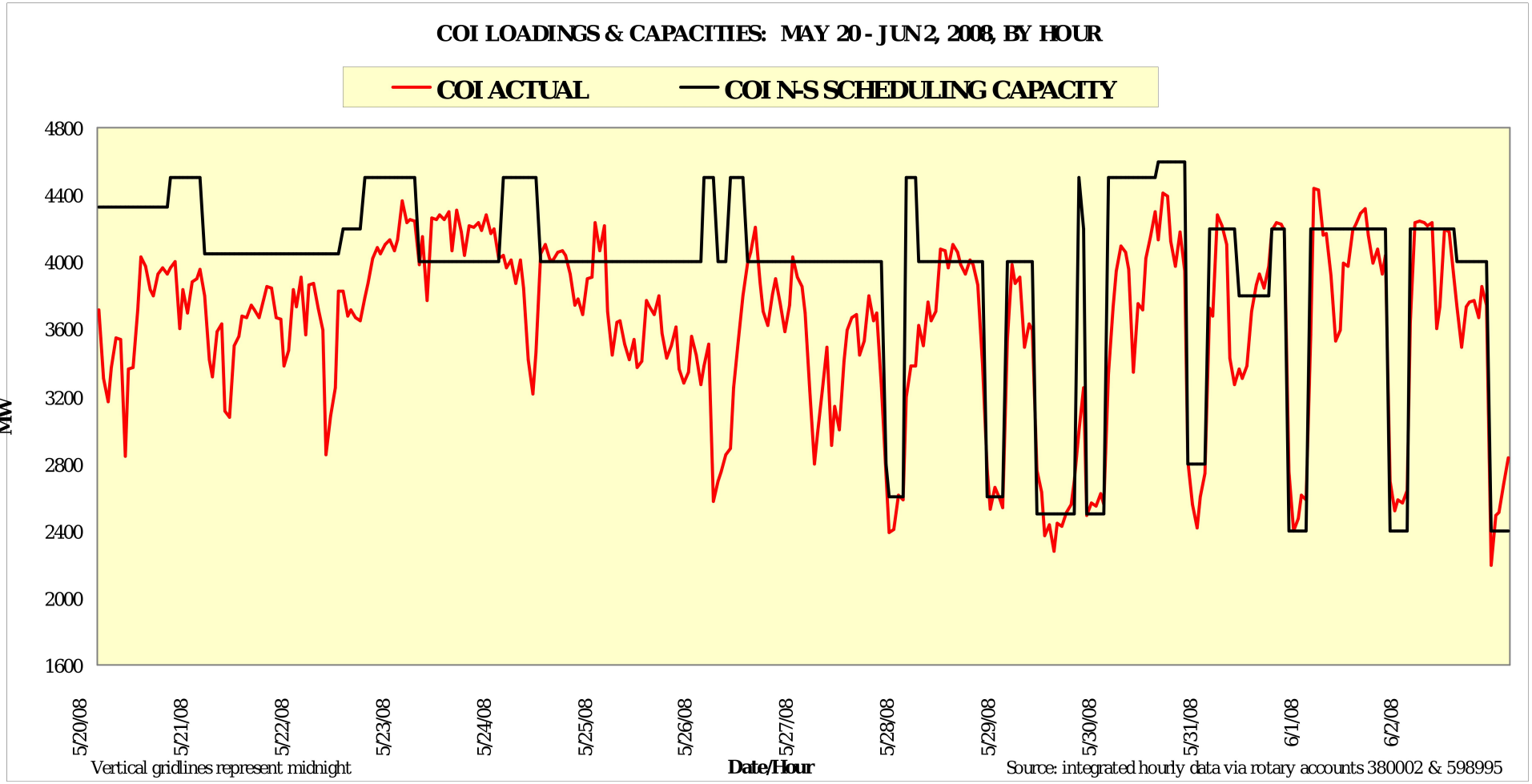
Outage

- Daily outages from 1900 to 2400 hours were coordinated to minimize the impact of the outage
  - All the repairs that are needed can be done during this 20 day period
  - Some of the work is being done during darkness so only the local line crew that is familiar with the terrain is willing to do the work

Outage Impacts

- The COI OTC is reduced to 2800 MW
  - The next slide shows the actual COI flow versus the scheduling limit which is lower than the OTC
- The PDCI is allowed to go to full 3100 MW capacity during the outage

COI Actual Flow vs Scheduling Capacity



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